

**WHAT IS CLAIMED:**

1. (currently amended) In an artificial limb for amputees who have a residual limb, the residual limb being encased in a liner, the residual limb and liner being inserted into an artificial limb socket having a first space between the liner and the socket, an apparatus for wicking away perspiration from the residual limb, the apparatus comprising: an osmotic membrane to encase the residual limb and adapted for placement between the residual limb and the liner, thereby creating a second space between the residual limb and the liner, the membrane being adapted to allow the passage of water vapor in one direction only, from the residual limb towards the liner, further comprising:

- (a) a vacuum source connected to the second space between the liner and the residual limb and to the first space between the liner and the socket, wherein application of the vacuum source to the second space between the liner and the residual limb lowers the partial water vapor pressure in the second space, allowing water vapor to pass more readily through the osmotic membrane, and wherein application of the vacuum between the liner and the socket draws the residual limb and liner into total contact with the socket interior;
- (b) a seal means for sealing the first space and the second space; and
- (c) a means to maintain a vacuum in the first space and the second space, in the presence of some air leakage past the seal means.

Claim 2 (cancelled).

Claim 3 (cancelled).

4. (previously amended) The apparatus of claim 1, wherein the seal means further comprises a nonfoamed, nonporous polyurethane suspension sleeve for rolling over and covering the socket and a portion of the residual limb.

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5. (currently amended) The apparatus of claim 1, wherein the vacuum source is a vacuum pump and the means to maintain the vacuum in the cavity first space and second space is a regulator, and further comprising a power source for the vacuum pump and the regulator.

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6. (currently amended) The apparatus of claim 1, wherein the vacuum source and the means to maintain the vacuum in the cavity first space and second space further comprise a weight-actuated vacuum pump.